**Stat and Data Analysis Practice 5.2**

1. Identify the following numbers as parameters or statistics: A scientist is interested in whether a new light bulb lasts longer than the old brand. So he tests 100 old and 100 new bulbs. He finds that the old bulbs last on average **603.24 hours** and the new bulbs last on average **713.76 hours.**
2. (a) Write instructions for selecting an SRS of 5 people from the list below.

Jim Matt Maria Amy Jason

John Pete Jenny Tom Justin

Suzy Dave Christine Chris Laura

Sarah Joe Megan Maureen Gretchen

(b) Complete the SRS using the table of random digits below. Write down the names you select.

81959 59951 75098 98362 18783 17594 28897 86898 87765 98820 18352 90939 71868

28785 95102 78527 02020 05387 33879 29273 86115 43866 28811 06214 53559 44573

1. An economist is interested in the average price of gas in Philadelphia area. He drives around Philadelphia and records the price for Regular gas at the first 15 gas stations he sees. He finds that the average price for regular gas is $3.56 per gallon.
   1. What is $3.56?
   2. What is the parameter of interest?
   3. What is the sample?
   4. What is the population?
   5. What is the sample design?
   6. Would the results be reliable?
2. A Philadelphia talk show host is interested to hear reactions to the mayor’s proposal for a soda tax. He instructs his listeners to log onto the show’s website to voice their opinion. At the website the visitor is given this question: “Given that the city of Philadelphia collected over $418 million dollars in tax revenues last year, do you support or oppose a city-wide tax on sodas and sweetened drinks?” At the end of the day he finds that of 389 people that voted 321 were opposed to the new tax.
   1. What percent of people were opposed to the tax?
   2. What is the parameter of interest?
   3. What is the sample?
   4. What is the population?
   5. What is the sample design?
   6. Would the results be reliable?